GOVERNMENT OF WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 8398/1
File Number: DWERVT3420
Duration of Permit: 5 October 2019 to 5 October 2021

PERMIT HOLDER

WC Roberts & CA Roberts

LAND ON WHICH CLEARING IS TO BE DONE

Lot 100 on Deposited Plan 414076, Yanmah

AUTHORISED ACTIVITY

The Permit Holder must not clear more than 7.7225 hectares of native vegetation within the area cross hatched yellow on attached Plan 8398/1.

CONDITIONS

1. Avoid, minimise and reduce the impacts and extent of clearing

In determining the amount of native vegetation to be cleared authorised under this Permit, the Permit Holder must have regard to the following principles, set out in order of preference:

(a) avoid the clearing of native vegetation;
(b) minimise the amount of native vegetation to be cleared; and
(c) reduce the impact of clearing on any environmental value.

2. Dieback and weed control

When undertaking any clearing authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *dieback* and *weeds*:

(a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
(b) ensure that no known *dieback* or *weed*-affected soil, mulch, fill or other material is brought into the area to be cleared; and
(c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

3. Soil management

The Permit Holder must not add fertiliser to the soil without the prior addition of a nutrient retentive material to minimise the risk of phosphorus export.

4. Records must be kept

The Permit Holder must maintain the following records for activities done pursuant to this Permit, in relation to the clearing of native vegetation authorised under this Permit:

(a) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
(b) the date that the area was cleared;
(c) the size of the area cleared (in hectares);
(d) actions taken to avoid, minimise and reduce the impacts and extent of clearing in accordance with condition 1 of this Permit;
(e) actions taken to minimise the risk of the introduction and spread of *weeds* and *dieback* in accordance with condition 2 of this Permit; and
(f) actions taken to manage the risk of phosphorus loss from soil in accordance with condition 3 of this Permit.

5. Reporting

The Permit Holder must provide to the *CEO* the records required under condition 4 of this Permit, when requested by the *CEO*.

DEFINITIONS

The following meanings are given to terms used in this Permit:

CEO: means the Chief Executive Officer of the Department responsible for the administration of the clearing provisions under the *Environmental Protection Act 1986*;

dieback means the effect of Phytophthora species on native vegetation;

fill means material used to increase the ground level, or fill a hollow;

mulch means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation;

weed/s means any plant -

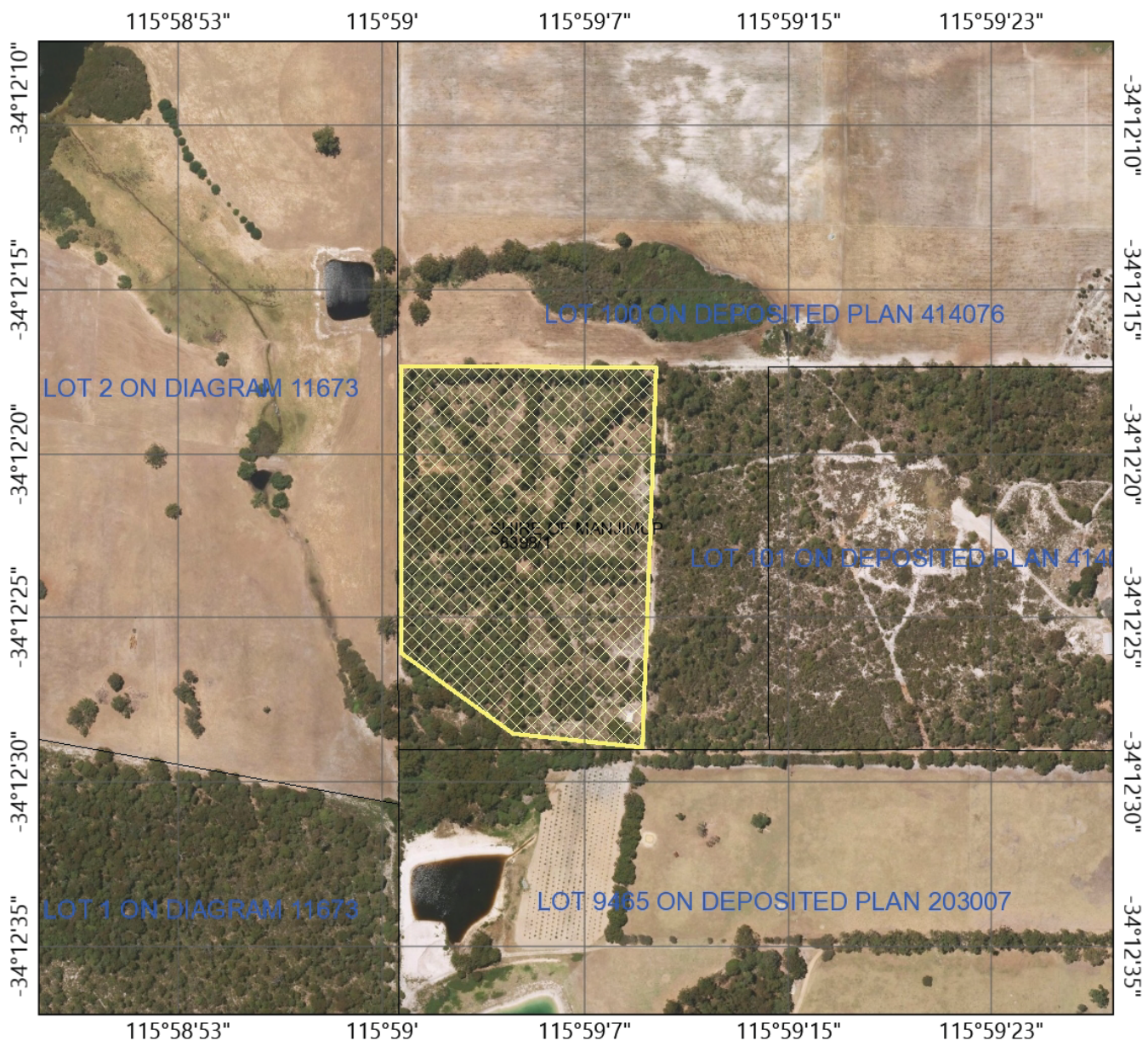
(a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or
(b) published in a Department of Biodiversity, Conservation and Attractions Regional Weed Rankings Summary, regardless of ranking; or
(c) not indigenous to the area concerned, or

Mathew Gannaway
MANAGER
NATIVE VEGETATION REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

5 September 2019

CPS 8398/1 Plan



Legend

- CPS areas approved to clear
- Local Government Authorities
  - LGA
  - MANJIMUP, SHIRE OF
- Roads - State Roads
- Roads - Minor Roads
- Cadastre (LGATE_218) -

0.2 0.09 0.2 Kilometers

WGS_1984_Web_Mercator_Auxiliary_Sphere

Officer *Date*

Officer with delgated authority under Section 20 of the Environmental Protection Act 1986.

Locality Map

Government of Western Australia
Department of Water and Environmental Regulation

Government of Western Australia
Department of Water and Environmental Regulation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 8398/1
Permit type: Area Permit

1.2. Applicant details

Applicant's name: Charlie Roberts
Application date: 6 March 2019

1.3. Property details

Property: Lot 100 on Deposited Plan 414076
Local Government Authority: Shire of Manjimup
Locality: Yanmah

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	Purpose category
12.35 ha (revised to 7.7225 ha)	-	Mechanical Removal	Hazard reduction

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 5 September 2019

Reasons for Decision:

The clearing permit application was received on 6 March 2019 and has been assessed against the clearing principles, planning instruments and other matters in accordance with section 51O of the *Environmental Protection Act 1986* (EP Act). It has been concluded that the proposed clearing may be at variance to principle (g), and is not likely to be at variance to the remaining clearing principles.

The Delegated Officer determined that the proposed clearing may increase the risk of weeds and dieback spreading into the adjacent native vegetation. Weed and dieback management measures will mitigate this risk.

The Delegated Officer determined that the proposed clearing may increase the risk of land degradation in the form of phosphorus loss. Soil management measures will mitigate this risk.

The Delegated Officer took into account that the applicant removed a portion of the application area that contained remnant native vegetation considered to be in very good to excellent (Keighery, 1994) condition that may have contained threatened and priority flora and the area in the south western corner that was considered to be growing in, or in association with, an environment associated with a watercourse.

In determining to grant a clearing permit subject to conditions, the Delegated Officer determined that the proposed clearing is not likely to lead to any unacceptable impacts on the environment.

2. Site Information

Clearing Description:

The original application was for the proposed clearing of 12.35 hectares of native vegetation within Lot 100 on Deposited Plan 414076, Yanmah, is for the purpose of reducing fuel load and to re-establish agricultural land use.

Following correspondence received by the Department of Water and Environmental Regulation (DWER), the applicant reduced the application area to 7.7225 hectares.

Vegetation Description:

The application area intersects two mapped Mattiske vegetation complexes (Mattiske and Havel, 1998); namely:

- Crowea (CRb), described as a tall open forest of *Corymbia calophylla-Eucalyptus diversicolor* on upper slopes with *Allocasuarina decussata-Banksia grandis* on upper slopes in hyperhumid and perhumid zones (Mattiske and Havel, 1998).

- Pemberton (PM1), described as a tall open forest of *Eucalyptus diversicolor* with mixtures of *Corymbia calophylla* on valley slopes and low forest of *Agonis juniperina-Banksia seminuda-Callistachys lanceolata* on valley floors in the perhumid zone (Mattiske and Havel, 1998).

Photographs provided by the applicant show a range of vegetation which varies from the eastern side of the application to the western side (Roberts, 2019). The eastern portion comprises of approximately 4 hectares of remnant native vegetation described as; *Corymbia calophylla* (marri) and *Eucalyptus marginata* (jarrah) open forest and the western portion of the application area comprises of mostly planted vegetation (around 8 hectares) with some regrowth but is dominated by planted *Eucalyptus diversicolor*. The south-western corner of the application area appears to intersect a watercourse.

Vegetation Condition:

The eastern portion of the application area (approximately four hectares) is in very good to excellent (Keighery, 1994) condition and the western portion (approximately 8 hectares) is in degraded (Keighery, 1994) condition, described as;

- Degraded: Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. (Keighery, 1994).
- Very Good: Vegetation structure altered; obvious signs of disturbance. (Keighery, 1994).
- Excellent: Vegetation structure intact, disturbance affecting individual species and weeds are non-aggressive species (Keighery, 1994).

Soil Type:

The application area intersects two different soil map units, as described below;

- Crowea (Dwalganup), yellow duplex phase, map unit 254DwCRy described as broad ridge crests on weathered mantle over gneiss with loamy gravels and duplex sandy gravels (Schoknecht et al., 2004); and
- Pemberton subsystem (Dwalganup), map unit 254DwPM described as minor valleys (20-40 metres deep) on colluvium over gneiss with loamy gravels, friable red/brown loamy earths, brown loamy earths and red deep loamy duplexes (Schoknecht et al., 2004).

Comment:

The local area referred to in the below assessment is defined as the area within a 20 kilometre radius of the application area.

Figure 1. Map of the original application area (hatched blue)

Figure 2. Map of revised application area (hatched blue)

3. Minimisation and mitigation

On 18 June 2019, the DWER wrote to the applicant to advise that the proposed clearing had the potential to impact on the following flora species;

- *Caladenia christineae* (T);
- *Caladenia harringtoniae* (T);
- *Andersonia sp.* Echidna (A.R. Annels ARA 5500) (P2);
- *Caladenia erythrochila* (P2);
- *Hemigenia microphylla* (P3);
- *Lepyrodia heleocharoides* (P3);
- *Pultenaea pinifolia* (P3);
- *Stylidium ireneae* (P4);
- *Tetraria sp. Blackwood River* (A.R. Annels 3043) (P3);
- *Thomasia brachystachys* (P2) *and*
- *Thysanotus unicupensis* (P3)

In addition to the above, the applicant was advised that a portion of the application area contained vegetation that may be considered to be growing in, or in association with, an environment associated with a watercourse.

The applicant subsequently amended the clearing permit footprint area and reduced the clearing size from 12.35 hectares to 7.7225 hectares, thereby minimising the environmental impacts to the above listed species through;

- The avoidance of a four hectare patch of native vegetation considered to be in in very good to excellent (Keighery, 1994) condition which was considered to support habitat for the above listed threatened and priority flora species.
- The avoidance of a patch of vegetation which appears to intersect a watercourse and may be considered to be growing in, or in association with, an environment associated with a watercourse.

The following assessment is the preliminary assessment of the original 12.35 hectare area. Section 5 below outlines the amendments made by the applicant and the consideration of the variances made in response to the amendments.

4. Assessment of application against clearing principles

(a) Native vegetation should not be cleared if it comprises a high level of biodiversity.

Proposed clearing may be at variance to this principle

According to available datasets, two threatened flora species, two Priority 1 (P1), three P2, eight P3 and five P4 species have been recorded within the local area. None of these records occur within the application area. The application area contains approximately four hectares of naïve vegetation that is considered to be in very good to excellent (Keighery, 1994) condition and may support the following threatened and priority flora;

- *Andersonia* sp. Echidna (A.R. Annels ARA 5500) (P2) – known from 5 records, found in association with *Eucalyptus marginata, Corymbia calophylla* and on sandy gravel soils.
- *Caladenia christineae* (T) – known from 54 records, one of which is in the local area. This species is recorded as growing in brown sandy loam and associated with winter wet areas.
- *Caladenia erythrochila* (P2) – known from only two records in Western Australia, this species has been recorded within the local area on gentle slopes with a forest of *Eucalyptus marginata* and *Corymbia calophylla.*
- *Caladenia harringtoniae* (T) – known from eight records in the local area, this species has been recorded on many soil types including sandy and loam soils and in association with a forest of *Eucalyptus marginata* and *Corymbia calophylla.*
- *Hemigenia microphylla* (P3) – known from 25 records, two of which are in the local area, this species has been recorded on many soil types and is found along creek lines.
- *Lepyrodia heleocharoides* (P3) – known from 20 records, one of which is in the local area. The record from the local area was found in a *Eucalyptus patens* open woodland.
- *Pultenaea pinifolia* (P3) – this species is recorded once within the local area and has been recorded in loam soils and in Eucalyptus forests.
- *Stylidium ireneae* (P4) – a local recording of this species occurs within the same mapped soil and vegetation types as the application area.;
- *Tetraria* sp. Blackwood River (A.R. Annels 3043) (P3) – known from seven records. A record in the local area has been recorded in a *Eucalyptus patens* woodland.
- *Thomasia brachystachys* (P2) – a recording of this species in the local area occurs within sandy loam soils and in Eucalypt forest.
- *Thysanotus unicupensis* (P3) – known from two recordings within the local area. This species has been recorded in sand and loam soils and in association with *Eucalyptus marginata, Corymbia calophylla, Banksia grandis*, *Xanthorrhoea preissii* and *Podocarpus drouynianus*.

As assessed under principle (b), the application area provides foraging habitat for forest red-tailed black cockatoo (*Calyptorhynchus banksii* subsp. *naso*), Baudin's cockatoo (*Calyptorhynchus baudinii*) and Carnaby's cockatoo (*Calyptorhynchus latirostris*) and may provide habitat for ground-dwelling species. The application area is not considered to provide significant habitat for these species noting that habitat is well represented in the local area.

According to available datasets, no threatened ecological communities (TECs) or priority ecological communities (PECs) are mapped within the local area. The vegetation within the application area is not likely to comprise the whole or a part of, or be necessary for the maintenance of a PEC or TEC.

The local area retains approximately 75 per cent cover of remnant native vegetation (approximately 26,000 hectares). The majority of this remnant vegetation occurs within lands managed by the Department of Biodiversity, Conservation and Attractions (DBCA). The local area is expected to contain vegetation and fauna habitats in similar or better condition than those within the application area. The application area is not considered to be part of an ecological linkage.

Given the vegetation within the application area contains approximately four hectares of native vegetation in an excellent to very good (Keighery, 1994) condition, approximately 8 hectares in a degraded (Keighery, 1994) condition and may contain threatened and priority flora, the proposed clearing may be at variance to this principle.

(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna.

Proposed clearing is not likely to be at variance to this principle

According to available databases, 12 Threatened fauna species, one fauna species protected under international agreement, four specially protected fauna species, two Priority 3 (P3) fauna species and six Priority 4 species have been recorded within the local area (DBCA, 2007-). The threatened species include;

- *Bettongia penicillata* (Woylie)
- *Bettongia penicillata* subsp*. ogilbyi* (Woylie)
- *Calyptorhynchus banksii* subsp*. naso* (forest Red-tailed black cockatoo)
- *Calyptorhynchus baudinii* (Baudin's cockatoo
- *Calyptorhynchus latirostris* (Carnaby's cockatoo)
- *Dasyurus geoffroii* (Chuditch)
- *Galaxiella munda* (mud minnow)
- *Galaxiella nigrostriata* (black-stripe minnow)

- *Myrmecobius fasciatus* (Numbat)
- *Pseudocheirus occidentalis* (western ringtail possum)
- *Setonix brachyurus* (Quokka)
- *Westralunio carteri* (Carter's freshwater mussel)

From supporting information provided by the applicant, it is unlikely that the application area provides significant breeding habitat for the black cockatoo species listed above. The western side of the application contains approximately 8 hectares of vegetation which is dominated by planted *Eucalyptus diversicolor* which do not appear to be mature enough to support breeding habitat for the black cockatoo species. The remnant vegetation within the eastern side of the application area contains both *Eucalyptus marginata* and *Corymbia calophylla* species over a middle story of *Astartea* species, sedge species and *Macrozamia* species. While this remnant vegetation may provide suitable foraging habitat for forest red-tailed black cockatoo (*Calyptorhynchus banksii* subsp. *naso*), Baudin's cockatoo (*Calyptorhynchus baudinii*) and Carnaby's cockatoo (*Calyptorhynchus latirostris*), the tree species in this area do not appear to be of a size to contain any hollows suitable for breeding. The remnant vegetation may provide habitat for ground dwelling fauna species, however there are vast areas of state forest to the North, South and West of the application area within a distance of five kilometres that provides suitable habitat in better condition.

The western ringtail possum has a preference for habitat dominated by *Agonis flexuosa* (peppermint) near coastal areas, swamps, watercourses or floodplains. From the supporting information provided by the applicant, no areas dominated by peppermint trees were observed within the application area. The application area is unlikely to provide significant habitat for the western ringtail possum.

Records of *Westralunio carteri* (Carter's Freshwater Mussel) within the local area are associated with larger waterbodies. As these are not represented in the application area, the proposed clearing is not likely to impact on habitat for this species.

Noting that the local area retains a large extent of native vegetation that is likely to provide similar or better habitat as found within the application area, and that this vegetation is highly connected and predominantly on land managed by DBCA, the proposed clearing is not expected to result in the loss of significant fauna habitat.

The proposed clearing is not likely to be at variance to this principle.

(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.

Proposed clearing may be at variance to this principle

According to available datasets, two threatened flora species (*Caladenia harringtoniae* and *Caladenia christineae*) have been recorded within the local area.

The threatened flora species *Caladenia harringtoniae* and *Caladenia christineae* have been recorded on sand, clayey loam and laterite soils and are known to inhabit the margins of winter wet swamps and freshwater lakes. This species typically inhabits paperbark (*Melaleuca* species) and *Eucalyptus rudis* (flooded gum) swamps and flats which are inundated for several months of the year. These species may also be found along creek lines in *Eucalyptus marginata* (jarrah) *and Eucalyptus diversicolor* (karri) forest (Brown et al., 1998). Given that the application intersects a perennial water course (the south western extent of the application area), and contains similar soil types and vegetation types to those associated with recordings of these threatened flora species, the proposed clearing may provide habitat for these species.

An appropriately timed survey would be required to determine if threatened flora are located within the application area.

The proposed clearing may be at variance to this principle.

(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.

Proposed clearing is not likely to be at variance to this principle

According to available datasets, no state listed TECs are mapped within the local area.

The vegetation proposed to be cleared is not likely to comprise the whole or a part of, or be necessary for the maintenance of a TEC.

The proposed clearing is not likely to be at variance to this principle.

(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.

Proposed clearing is not likely to be at variance to this principle

The National Objectives and Targets for Biodiversity Conservation 2001-2005 include a target to have clearing controls in place that prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750 (i.e. pre-European settlement) (Commonwealth of Australia, 2001).

As indicated in Table 1, the Warren Interim Biogeographic Regionalisation of Australia (IBRA) bioregion, and the two mapped South-West vegetation complexes all retain greater than 30 per cent of their pre-European extents.

The local area retains approximately 75 per cent native vegetation cover.

Given the above, the application area is not likely to be significant as a remnant of native vegetation in an area that has been extensively cleared. The proposed clearing is not likely to be at variance to this clearing principle.

Table 1: Bioregion and vegetation extent statistics (Government of Western Australia, 2017)

	Pre-European extent	Current extent remaining		Current extent remaining in DBCA managed lands	
	(ha)	(ha)	(%)	(ha)	Proportion of current extent (%)
IBRA bioregion					
Warren	833,986	659,438.59	79	557,880	84.6
Mattiske vegetation complex					
CRb	52,753	45,381	86	42,940	81.4
PM1	25,801	16,743	65	14,973	58

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

Proposed clearing is at variance to this principle

According to available datasets, the application area is located between two branches of a minor perennial watercourse. The watercourse flows to the north and then west for a total distance of approximately four kilometres to where it enters the Donnelly River.

The vegetated area within the south western corner of the application area, closest to the minor perennial watercourse, appears to comprise primarily of planted species with a small amount of remnant vegetation. The remnant vegetation within this portion of the application area appears to be growing in, or in association with, an environment associated with a watercourse. Therefore the proposed clearing is at variance to this principle.

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

Proposed clearing may be at variance to this principle

A land degradation assessment undertaken by the Department of Primary Industries and Regional Development (DPIRD) identified that the application area has a high to moderate land capability for the proposed land use. The Commissioner of Soil and Land Conservation advised that (DPIRD, 2019):

- The coarse deep sands of Map Unit 254DwCRy may be susceptible to phosphorus loss. The risk of phosphorus loss from these soils is moderate and may contribute to eutrophication of surface and groundwater bodies. The risk of phosphorus loss could be reduced with soil amelioration (claying and addition of organic matter) to improve water holding capacity;
- The risk of salinity causing land degradation is low;
- Wind erosion is unlikely due to low wind exposure in this area;
- Water erosion may increase due to landform and soil types, particularly on steeper slopes as a result of clearing. This risk could be reduces if appropriate surface water control is implemented;
- The risk of waterlogging is considered low.

Given the above the proposed clearing may be at variance to this principle.

Avoiding the watercourse within the southwestern portion of the application area will reduce the potential for water erosion.

(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

Proposed clearing is not likely to be at variance to this principle

Four conservation areas are located approximately two kilometres from the application area to the north, west and south, being North Donnelly State Forest, South East Nannup State Forest, Donnelly River Nature Reserve and Donnelly State Forest.

These conservation areas are contiguous with each other and are separated from the application area by cleared farmland. Given this and the distance to these conservation areas, no significant impacts to their environmental values are expected. The proposed clearing is not likely to be at variance to this principle.

(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.

Proposed clearing is not likely to be at variance to this principle

As discussed under principle (f), the application area is located between two branches of a minor perennial watercourse which traverses both farmland and vegetated areas, and enters the Donnelly River approximately four kilometres downstream.

As detailed under principle (g), the soil unit 254DwCRy may be susceptible to phosphorus export risk. DPIRD considers the risk rating to be moderate (DPIRD, 2019). The soil unit 254DwCRy is mapped as occurring on the eastern half of the application area. Given the location of the soil units in relation to the water courses, the proposed clearing may cause deterioration in quality of surface water in the water course. However, It is considered that these soils are likely to be responsive to soil amendments such as claying and addition of organic matter and the risk of phosphorus loss from these soils could be reduced by soil amelioration.

In relation to groundwater quality, the proposed clearing is not expected to result in changes to groundwater levels or quality given the size of the application area in relation to the extent of native vegetation cover in the local area.

The proposed clearing is not likely to be at variance to this principle.

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

Proposed clearing is not likely to be at variance to this principle

Noting the size of the application area and the extent of native vegetation cover in the local area, the proposed clearing is not likely to cause, or exacerbate, the incidence or intensity of flooding. DPIRD advises that the application area is dominated by loamy gravels, loamy earths, pale and duplex sandy gravels, and that the proposed clearing is not expected to contribute to flooding on the proposed clearing area (DPIRD, 2019).

The proposed clearing is not likely to be at variance to this principle.

Planning instruments and other relevant matters.

The application was advertised on DWER's website on 19 March 2019 with a 21 day submission period. One public submission was received in relation to this application as detailed below,

The public submission raised the following concerns (Submission, 2019);

- The application area is linked to the bushland to the west and to Jones Road reserve and to a stream to the east.
- Due to the connection, the southern portion of vegetation should be retained.
- Fire proneness is not an excuse for clearing, it is known prior to land purchase.

The concerns of the public submission have been addressed under the clearing principles discussed above, and by the reduction in the application area by the applicant. The final point made by the submission is outside the scope of the Clearing Principles for native vegetation under Schedule 5 or the EP Act.

The application area is located within the Donnelly River System Surface Water Area proclaimed under the *Rights in Water and Irrigation Act 1914* (RIWI Act). Undertaking works that obstruct, interfere or destroy the bed or banks of a watercourse or wetland within a proclaimed surface water area may require an additional permit from DWER.

The Shire of Manjimup advised that the land is zoned by Local Planning Scheme No. 4 as 'Priority Agriculture' and planning approval for clearing of vegetation is not required in this zone. The Shire of Manjimup also advised that horticulture does not require planning approval (Shire of Manjimup, 2019).

5. Reconsideration of clearing principles following applicants submissions

On 18 June 2019, the DWER wrote to the applicant, outlining the impacts identified during the assessment of the application, and inviting the applicant to provide additional advice addressing these matters. The applicant was provided with an alternate option to avoid and minimise the impacts identified by reducing the area to be cleared which avoided vegetation considered to be in in very good to excellent (Keighery, 1994) condition and avoided a patch of vegetation which appears to intersect a watercourse.

On 5 August 2019, the applicant amended the application by reducing the clearing area from 12.35 hectares to 7.7225 hectares which was aligned with the alternate clearing option provided by DWER.

The reduced clearing area avoids the four hectares of native vegetation considered to be in in very good to excellent (Keighery, 1994) condition and considered to potentially contain threatened and priority flora. The degraded remnant maintained within the application area is not likely to contain threatened and priority flora. Considering the reduced application area, the proposed clearing is not likely to be at variance to principle (a) or (c).

In regard to principle (g), the risk of water erosion has been reduced by the avoidance of the southwestern portion of the application. Due to the risk of phosphorus loss from these soils there is no change to the variance of this principle, the proposed

clearing may be at variance to principle (g). To minimise the risk of phosphorus loss, the permit includes a soil management condition.

In regard to principle (f), the reduced clearing area avoids vegetation that area appears to be growing in, or in association with, an environment associated with a watercourse. Considering the reduced area, the proposed clearing is not likely to be at variance to principle (f).

There is no change to the remaining clearing principles following the reduction in the application area.

6. References

Commonwealth of Australia (2001). National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.

Department of Primary Industries and Regional Development (DPIRD) (2019). Land Degradation Assessment Report for CPS 8398/1. Department of Primary Industries and Regional Development, Western Australia. DWER Ref: A1782655

Department of Parks and Wildlife (2007-). NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. URL: http://naturemap.dpaw.wa.gov.au/. Accessed March 2019.

Government of Western Australia (2018). 2017 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of December 2017. WA Department of Biodiversity, Conservation and Attractions. https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics

Government of Western Australia (2018). 2017 South West Vegetation Complex Statistics. Current as of October 2017. WA Department of Biodiversity, Conservation and Attractions, Perth, https://catalogue.data.wa.gov.au/dataset/dbca

Keighery, B.J. (1994). Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Mattiske, E.M. and Havel, J.J. (1998). Vegetation Complexes of the South-west Forest Region of Western Australia. Maps and report prepared as part of the Regional Forest Agreement, Western Australia for the Department of Conservation and Land Management and Environment Australia.

Roberts, C (2019) Clearing Permit Application CPS 8398/1 DWER Ref: A1783114 and A1771243

Submission (2019). Comments received in relation to clearing permit application CPS 8398/1. DWER reference: A1773947

Shire of Manjimup (2019). Advice for Clearing Permit CPS 8398/1. Western Australia. DWER Ref: A1775857, A1771243

Western Australian Herbarium (1998-). FloraBase – the Western Australian Flora. Department of Biodiversity, Conservation and Attractions. https://florabase.dpaw.wa.gov.au/. Accessed April 2019.

GIS Databases:

-Aboriginal Sites of Significance
-DAFWA Heritage
-DBCA Estate
-DEC Covenant
-Groundwater salinity
-Hydrography, linear
-National Trust WA Covenant
-Remnant vegetation
-SAC bio datasets (accessed April 2019)
-Soils, Statewide
-Topographic contours
-Wetlands